

REMARKS/ARGUMENTS

Claims 1-11, 14-19 and 22-26 are present in this application. By this Amendment, claim 10 has been amended, claims 12, 13 and 21 have been canceled, and claims 22-26 have been added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Claims 10, 12, and 13 were rejected under 35 U.S.C. §103(a) over U.S. Published Patent Application No. 2003/0181302 to Kaiser et al. in view of U.S. Patent No. 5,763,345 to Ohshima et al. This rejection is respectfully traversed.

The clay for use in the present invention is made to have a specific particle diameter distribution, i.e., the content of particles with a particle size of 5 μm or larger being not higher than 30% by weight based on the weight of the clay, and have a reduced amount of impurities, by elutriation or a wet sizing separation purification. Owing to the use of such specific clay, excellent heat resistance and durability can be attained, and damages to a conveyed plate glass can be suppressed.

Clay is a natural mineral, and products obtained through grinding and classification are on the market. Thus, it cannot be assumed that commercial products satisfy the above-mentioned specific particle distribution. In producing a processed product using clay as a material, it is general to purchase clay to be used from the market. A commercial product is also used in the present application. As shown in the Examples, three types of clay were prepared as follows:

non-treated kibushi clay

elutriated kibushi clay having a content of particles of 5 μm or larger of 30% by weight or less

elutriated kibushi clay having a content of particles of 5 μm or larger of 30% by weight or less.

In view of the claim amendments as set forth above, Examples 1B, 2B and 6B are “Comparative” relative to the claimed invention. In Example 6B, elutriated clay was used in an amount (50% by weight) larger than the claimed range (20-40% by weight), and scratches were caused on glass. Even if elutriation treatment is carried out, impurities cannot be removed completely. Therefore, when elutriated clay is used in an excess amount, an effect of the impurities develops. According to the present invention as amended above, the amount of the specific clay is limited (i.e., 40% by weight at the most), which thereby prevents damages to plate glass while maintaining good wear resistance.

In the present invention, the defined clay has a specific particle diameter distribution (in which 70% by weight or more of the particles have a particle size of 5 μm or smaller). Such clay having a narrow particle diameter distribution provides a greater binding effect and is excellent in wear resistance. However, such an effect cannot be sufficiently attained unless the clay is used in a given amount or higher. The wear resistance in each of Examples 1B and 2B is inferior even compared with Comparative Examples 1B to 3B. Examples 1B and 2B each used 10% by weight of elutriated clay.

Example 3B showed a higher surface hardness as compared with Example 2B. Thus, the lower limit of the amount of the specific clay for attaining practically favorable surface hardness and wear resistance is 20% by weight. In addition, when the clay amount is from 30 to 40% by weight, further superior results are obtained as shown in Examples 4B and 5B.

Such specific effects as set forth above and defined in the claims evidence the criticality of the claimed range(s), and Applicants submit that the claims are not obvious from the disclosures of the cited references.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 11 was rejected under 35 U.S.C. §103(a) over Kaiser in view of Ohshima and U.S. Patent No. 4,533,581 to Asaumi et al. The Asaumi patent, however, does not correct the deficiencies noted above with regard to Kaiser and Ohshima, taken singly or in combination. As such, Applicants submit that this dependent claim is allowable at least by virtue of its dependency on an allowable independent claim. Withdrawal of the rejection is requested.

Claim 21 was rejected under 35 U.S.C. §103(a) over Kaiser in view of Ohshima. Without conceding this rejection, claim 21 has been canceled. Withdrawal of the rejection is requested.

Claims 22-26 have been added and depend from independent claim 10. With reference to the comments above, Applicants submit that these dependent claims are allowable at least by virtue of their dependency on an allowable independent claim. Support for the subject matter of claim 22 can be found in the description of the examples; support for the subject matter of claim 23 can be found in the specification at page 18, last paragraph; support for the subject matter of claim 24 can be found in the specification at page 19, first paragraph; support for the subject matter of claim 25 can be found in the specification in the paragraph bridging pages 19-20; and support for the subject matter of claim 26 can be found in the specification at page 22, first full paragraph.

In view of the foregoing amendments and remarks, Applicants respectfully submits that the claims are patentable over the art of record and that the application is in condition for

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allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

Respectfully submitted,

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